

ABSTRACT OF THE DISCLOSURE

A method for adaptation of data organization by a data storage system controller is disclosed. Data organization in a data storage system is adapted according to varying workload profiles and system constraints. The data storage system also consists of a plurality of data storage units. On receipt of a request to write data, various workload and data storage system parameters are determined. On the basis of these parameters, target data storage units and appropriate data organization schemes are optimally selected. In the case where the volume of data to be written is less than a threshold value, a RAID organization scheme is preferred. In this scheme the data is written to the selected drives simultaneously. In the case where the volume of data to be written is more than the threshold value, a power managed RAID organization scheme, where all data drives need not be simultaneously powered on, is used.